

ABSTRACT

A multi-layer electrode structure is provided comprised of a plurality of electrode layers composed of a binder and an electrode material and coated on a current-collecting member, each of the electrode layers including a macromolecular substance wherein a first electrode layer in contact with the current-collecting member and the second electrode layer in contact with the first electrode layer are formed of different constituents or have different proportions of the same constituent. A method of forming the multi-layer electrode structures as well as a battery and double-layer capacitor formed from the multi-layer electrode structures are also disclosed.